

REMARKS

Summary Of The Office Action & Formalities

Claims 1-9 and 11 are all the claims pending in the application. By this Amendment, Applicants are amending claims 1, 2, 4, 5, 6, 7, and 9, and adding new claims 12-17. No new matter is added.

Claims 1-9 and 11 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention. Specifically, the Examiner states:

Applicants require the claimed reinforcing members to be in “a tire zone including at least each of the sidewall portions”, however because there is not definition by applicants in the original disclosure of the boundary between the “sidewall portions” and the adjacent “bead portions” and “tread portion” one of ordinary skill in the art would not know how to provide the claimed reinforcing members in “a tire zone including at least each of the sidewall portions”.

Office Action at pages 2-3. Applicants respectfully disagree.

“An inventor need not . . . explain every detail since he is speaking to those skilled in the art. What is conventional knowledge will be read into the disclosure. . . . ‘It is well settled that the disclosure of an application embraces not only what is expressly set forth in words or drawings, but what would be understood by persons skilled in the art. . . . [T]he applicant ‘may begin at the point where his invention begins, and describe what he has made that is new and what it replaces of the old. That which is common and well known is as if it were written out in the patent and delineated in the drawings.’” In re Howarth, 210 USPQ 689, 691-92 (CCPA

1981) (quoting In re Chilowsky 108 USPQ 321, 324 (1954) and Webster Loom Co. v. Higgins et al. 105 U.S. 580, 586 (1882)).

The term sidewall is well known to those skilled in the art to refer to the side portion of the tire between the tread shoulder and the rim bead. Indeed, consistent with this definition, Applicants' specification states:

In Fig. 1 is shown a diagrammatically section view of an embodiment of the pneumatic tire according to the invention at a state of being mounted onto a rim, in which numeral 1 is a tread portion, numerals 2i and 2o sidewall portions extending inward from the both sides of the tread portion 1 in a radial direction, numerals 3i and 3o bead portions continuously connected to inner ends of the sidewall portions 2i, 2o in the radial direction

Applicants' specification at page 8, lines 9-16 (emphasis added). Moreover, claim 1 is explicit on this point:

In a pneumatic tire comprising a tread portion, a pair of sidewall portions extending inward from both side parts of the tread portion in a radial direction, a bead portion continuously connected to an inner end of the sidewall portion in the radial direction

From the above, it is clear that the sidewall portions begin outside the bead cord in the radial direction and terminate prior to the tread. That is, the original application includes ample disclosure to assist those skilled in the art to locate the sidewall portions and implement the claimed invention without undue experimentation. Indeed, the Examiner has not provided any reason or evidentiary support for concluding the contrary.

Nevertheless, for the Examiner's consideration, Applicants are adding new claims 12 and 13, which depend from claims 1 and 11, respectively, and further specify that the sidewall

portions are between the bead cord and the tread. Applicants are also adding new claims 14 and 15, which depend from claims 1 and 11, respectively, and further specify that each tire includes a bead cord and a bead filler radially outward of the bead cord, and that the reinforcing member extends radially outward beyond the bead filler.

Claims 1-9 and 11 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. The Examiner refers to the previous Section 112(1) rejection discussed above for the alleged factual basis of her rejection. See Office Action at page 3.

The reasons for the rejection given by the Examiner do not support a rejection on these grounds. The purpose of the description requirement is to ensure that the inventor had possession, as of the filing date of the application relied upon, of the specific subject matter later claimed. Only when the scope of a claim has been changed, e.g., during prosecution of the patent application, do questions of compliance with the description requirement arise. Since the recited subject matter relied upon by the Examiner to reject the claims under 35 U.S.C. § 112, first paragraph, are in the claims as originally filed with the application (see least claim 1) , this rejection is incorrect as a matter of law.

Finally, claims 1-9 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite regarding the boundary between the “sidewall portions” and the adjacent “bead portions” and “tread portion.” Office Action at page 3. Applicants respectfully disagree and submit that one skilled in the art would readily understand the relative boundaries

between the recited elements from Applicants' disclosure (as explained above) and prior knowledge in the art regarding the location of a tire's tread portion, sidewall portion, and bead portion.

The prior art rejections are summarized as follows:

1. Claims 1-5 and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by newly cited Oshima (USP 5,620,538).

2. Claims 1-6, 9, and 11 are rejected under 35 U.S.C. § 102(b) as being anticipated by British Patent Specification 1,115,834 ("the '834 reference").

3. Claims 1-6, 9, and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the '834 reference in view of The Story Of Tire Beads And Tires ("The Story").

Claims 7 and 8 are not rejected on prior art grounds. Applicants note that claim 9 depends from claim 8, and, therefore, cannot be rejected on prior art grounds unless claim 8 is also rejected on prior art grounds. The Examiner is, therefore, kindly requested to clarify the status of claim 9.

On the other hand, claim 9 refers to "the turn-up reinforcing layer," which is first recited in claim 6, not claim 8 or 11. To correct this inconsistency, Applicants are amending claim 9.

Applicants respectfully traverse the prior art rejections.

Claim Rejections - 35 U.S.C. § 102

In rejecting claims 1-5 and 11 in view of Oshima, the grounds of the rejection state

See col. 1 lines 5-42, col. 2 line 60-col. 3, line 21, col. 4 lines 30-50, and col. 7 lines 11-15. It should be noted that applicants have defined the “reinforcing member” to include bead fillers as well as cord-reinforced layers (specification p. 10 lines 19-25).

Office Action at page 3.

The present invention relates to a pneumatic tire adapted to improve the braking performance of a vehicle, and in particular, the stability of the vehicle posture during sudden braking and the like. Applicants refer the Examiner to the Summary of the Invention set forth in their Appeal Brief of September 3, 2002, which is incorporated herein by reference.

To clarify certain aspects of the present invention, Applicants are amending claim 1 to recite a pair of mounted pneumatic tires, to recite that the reinforcing member comprises at least one rubberized cord reinforcing layer, and to recite the symmetrical relationship as currently recited in claim 3.

Applicants are also adding new claims 16 and 17, which depend from claim 1 and specify that the first and second tire zones of the same tire have the same rigidity in the radial direction, while the rigidity in the circumferential direction remain different as claimed. Support for these claims can be found generally in the disclosure regarding the dynamic operation of the tires, which one of working skill would clearly recognize. That is, according to an aspect of the invention, a requirement exists that both sidewall members have reinforcements. A consequence then, is that the construction is one where the tires provide a difference in shearing rigidity in the circumferential direction during the application of a braking force. This occurs between both sidewall portions on the assumption that there is no difference in rigidity except for that in the

circumferential direction. That would be recognized by the artisan given the nature of the construction of this invention.

Moreover, the application discloses orienting the cords in the reinforcing layers in the respective tire zones such that each cord act to develop a high resistance to tension against the shearing force in the circumferential direction in the first tire zone located on the outside of the vehicle, while the cord extending direction in the second tire zone of the same tire located at the inside of the vehicle is a direction which cannot develop a high resistance to tension against the shearing force in the circumferential direction. See, e.g., Fig. 5 and related discussion at page 15. On the other hand, one skilled in the art would readily understand that the rigidity in the radial direction is the same for the first and second tire zones.

Turning to the applied art, Applicants' claimed invention is clearly different in structure from the tire disclosed in Oshima '538. In particular, Applicants' claimed invention requires that the reinforcing members are arranged in the first and second tire zones in the left- and right-wheeled mounted tires symmetrically with respect to the center line of the vehicle in the widthwise direction.

On the other hand, in Oshima '538, as made clear from claims 1 and 4, for example, the tire construction has a number of reinforcing layers in the sidewall portion joined to the outer tread region of the tread portion that is positioned to be further axially outward toward the outer side of the race course that is larger than the number of the reinforcing layers in the sidewall

portion joined to the inner tread region of the tread portion that is positioned to be further axially inward toward the inner side of the *race course*.

Therefore, in the tire of Oshima '538, the reinforcing members arranged in the first and second tire zones in the left- and right-wheeled tires are asymmetrical with respect to the center line of the vehicle in a widthwise direction. To the contrary, as explained above, in the tire of the present invention, on the other hand, the tire zones in the left- and right-wheeled tires are symmetrical with respect to the center line of the vehicle in a widthwise direction.

Furthermore, in the tire of Oshima '538, the profile of the outer tread region of the tread portion and the profile of the inner tread region thereof are asymmetrical and the outer diameter and thickness differ. In the tire of the present invention as claimed, on the other hand, there is no need to make the profiles of both the inner tread regions asymmetrical and to adopt the different outer diameter and different thickness in both tread regions.

These stark differences in the constructions of the tires lead to very different results. Of significance, the tire according to the present invention as claimed results in the braking performance with offsetting moment forces with respect to the center line of the vehicle as described at page 12, lines 7-16 of the specification. Indeed, Table 1(a) demonstrates the improved cornering and stability of tires in accordance with the present invention as claimed. Of particular interest is the mounted right-wheeled tire of the Comparative Example has the same construction as the mounted right-wheeled tire of Example 2. On the other hand, the respective mounted left-wheeled tires are different, such that Example 2 has the symmetrical mounted

arrangement presently claimed. The performance differences are clearly significant.

Furthermore, such results cannot be achieved with the tire of Oshima '538, which is constructed to have increased rigidity in the radial direction so as to counteract excessive loads on the outside tread of the further axially outer tire of a race car when a race car travels on an oval track.

In rejecting claims 1-6, 9, and 11 as being anticipated by the '834 reference, the Examiner relies on the arguments of record in Paper No. 7 (Final Office Action of January 1, 2002), paragraph 4. Applicants have fully responded to these arguments in their Appeal Brief, which Applicants incorporate herein by reference. See Appeal Brief at pages 6-13.

Moreover, the '834 reference is entirely silent and does not teach or suggest the claimed arrangement of the reinforcing members of the pair of pneumatic tires mounted on the vehicle and the resulting performance of such mounted tires.

Claim Rejections - 35 U.S.C. § 103

In rejecting claims 1-6, 9, and 11 as being unpatentable over the '834 reference and The Story, the Examiner relies on the disclosure in The Story that the flipper "of ordinary dimensions" would extend beyond the bead components in a tire and, therefore, in the sidewall portions. See Office Action at pages 4-5.

First, Applicants maintain their position set forth in their Appeal Brief that the '834 reference fails to disclose a differential shearing rigidity in the circumferential direction that results in a differential breaking force in the inner and outer sidewall zones. Accordingly,

Applicants fully incorporate herein by reference in these arguments. See Appeal Brief at pages 11-13.

Moreover, as with the '834 reference, The Story reference is entirely silent and does not teach or suggest the claimed arrangement of the reinforcing members of the pair of pneumatic tires mounted on the vehicle and the resulting performance of such mounted tires.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Submitted herewith is a Petition For Extension Of Time with fee.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) [In a pneumatic tire] A pair of mounted pneumatic tires on a vehicle, each
tire comprising a tread portion, a pair of sidewall portions extending inward from both side parts of
the tread portion in a radial direction, a bead portion continuously connected to an inner end of the
sidewall portion in the radial direction, a carcass reinforcing these portions, a belt arranged on an
outer circumferential side of a crown portion of the carcass, and a reinforcing member comprised of
at least one rubberized cord reinforcing layer arranged in a tire zone including at least each of the
sidewall portions;[, an improvement] wherein a shearing rigidity of the reinforcing member in the
circumferential direction, which serves to apply a braking force to the tire, arranged in the same tire
at a posture of [mounting the] the mounted tire onto [a] the vehicle is made larger at a first tire zone
located at an outside of the vehicle than at a second tire zone located at an inside of the vehicle
among the above tire zones; and

wherein the pair of mounted tires are left- and right-wheeled tires symmetrically located at
both sides of the vehicle with respect to a center line of the vehicle in a widthwise direction and the
pair of mounted tires are constructed so that the reinforcing members arranged in the first and
second tire zones are symmetrical with respect to the center line in both tires.

2. (Amended) The pair of mounted pneumatic tires [A pneumatic tire] according to claim 1, wherein for each mounted tire, the reinforcing member is arranged in the tire zone ranging from the bead portion to the sidewall portion.

4. (Amended) The pair of mounted pneumatic tires [A pneumatic tire] according to claim 1, wherein for each mounted tire, [the reinforcing member arranged in the tire zone is comprised of at least one rubberized cord reinforcing layer, and] at least one of the number, width, cord stiffness and end count in the cord reinforcing layer [as] of the reinforcing member arranged in the first tire zone is made larger than the respective one in the cord reinforcing layer as the reinforcing member arranged in the second tire zone in the same tire.

5. (Amended) The pair of mounted pneumatic tires [A pneumatic tire] according to claim 4, where the reinforcing member for each mounted tire is comprised of plural reinforcing layers, cords of which layers being crossed with each other.

6. (Amended) The pair of mounted pneumatic tires [A pneumatic tire] according to claim 5, wherein for each mounted tire at least one of the reinforcing layers constituting the reinforcing member is a turn-up reinforcing layer wound around a bead core embedded in the bead portion from an inside toward outside in a widthwise direction of the tire.

7. (Amended) The pair of mounted pneumatic tires [A pneumatic tire] according to claim 6, wherein for each mounted tire, the reinforcing layers are arranged so as to cross cord of the reinforcing layers with each other in portions other than a turnup portion of the turn-up reinforcing layer turned outward in the widthwise direction of the tire.

Claim 9. (Amended) A pneumatic tire according to claim 8, wherein the reinforcing member comprises a plurality of reinforcing layers and at least one of the reinforcing layers is a turn-up reinforcing layer wound around a bead core embedded in the bead portion from an inside toward an outside in a widthwise direction of the tire, and wherein a portion of the turn-up reinforcing layer located at the innermost side in the widthwise direction of the tire is the innermost reinforcing layer.

Claims 12-17 are added as new claims.